NOTES ON AN INVESTIGATION OF INDUSTRIAL WASTES AT GENERAL BIOCHEMICALS, INC., BAINBRIDGE TOWNSHIP, GEAUGA COUNTY

Cuyahoga Falls, Ohio, June 10, 1963

On April 24, 1963 this writer in the company of Mr. Carl Dill, Sanitarian for the Geauga County Health Department, made an investigation of industrial waste discharges at the General Biochemicals, Inc., Bainbridge Township, Geauga County. This investigation was prompted by complaints registered with the Geauga County Health Department regarding color and odors arising in the small stream into which the industrial and sanitary sewage treatment devices empty. From the point at which sewage and industrial waste effluents discharge this stream flows generally in a north and west direction through built-up residential areas in Bainbridge Township and Chagrin Falls Village. In the portions of Bainbridge Township, this stream received some septic tank drainage.

A sample of the effluent discharging from the industrial waste treatment facility was secured prior to contacting the firm's officials. This plant is presently under active WPCB Permit No. 1185.5 for the discharge of treated industrial waste and sanitary sewage into waters of the State.

Mr. Herbert H. Davidson, Plant Superintendent, was interviewed and a tour of the plant buildings made in his company. Since the original WPCB permit was issued, General Biochemicals, Inc., a subsidiary of North American Mogul, has purchased and now occupies a small building adjacent to and just south of their existing building.

This building is used for the preparation of chemicals sold to research firms. Mr. Davidson stated that proline picrate and picric acid are used with methyl alcohol as a solvent. Methyl alcohol is the main waste and is dumped in the rear yard in small quantities and leaches away. Sanitary wastes from the few employees (maybe ten) flows to the spetic tank (said to be 12' long by eight feet wide) used by the former owners of the building. The secondary device, if any, was not known, but this drainage flows south to a small stream which flows in a westerly direction and discharges into the Chagrin River about three-fourths of a mile thence.

The main or original Biochemicals building located at Climax and Pine Streets manufactures custom-made about 24 different water treatment additives. This building employs upwards of 25 people and has a sanitary sewer flow estimated at 800 gallons per 36 hour period. Sanitary waste treatment consists of a number of large (unknown capacity) septic tanks (said to be 25 years old) located on the northwest corner of Pine and Climax Streets, and a siphon chamber and about a 20' x 20' surface sand filter located on the east side of South Main Street about 200 feet north of Pine Street. Filter effluent discharges into the stream in question.

The raw materials used in the manufacture of these conditioning products are:

(1) Sodium bi-carbonate
(2) Caustic soda
(3) Silicate
(4) Tri-sodium phosphate
(5) Mono-sodium phosphate
(6) Carbonate of potash
(7) Sodium bi-chromate
(8) Bentonite
(9) Hydrogen Aluminate
(10) TAMOL SN
(11) Various color dyes

Wastes result from the cleaning of the mixing vats and floor washdown. The industrial waste treatment device is located adjacent to the sanitary waste sand filters and appears to be a sizable tank employing a separator principal with baffles and tees. At the time of this visit this unit did not appear to be doing a satisfactory job although it was noted that the solids from this tank were recently removed.

From the results of the analysis of the sample collected by this writer and the unexplainable lack of similiarity between the monthly reports submitted by General Biochemical, it is suggested that a future conference be arranged with this office and representatives of General Biochemicals. It is further recommended that color be an added requirement on the monthly reported analysis of treated industrial wastes discharges performed by General Biochemicals and submitted to this office.

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District Sanitary Engineer

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